**Task1:**

**Queries:**

use testdb;

create table testdb.Assignments (course\_id INT PRIMARY KEY,course\_name VARCHAR(100),faculty VARCHAR(100),credits INT);

select \* from Assignments;

**JDBC Operations:**

package jdbc;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

public class jdbcq1 {

private static final String URL= "jdbc:mysql://localhost:3306/testdb";

private static final String USER= "root";

private static final String PASSWORD= "Shukrutha@2002";

public static Connection getConnection() throws SQLException {

Connection conn = DriverManager.*getConnection*(URL, USER, PASSWORD);

System.*out*.println("Connected to the database");

return conn;

}

}

**Output:**

Connected to the database

Insertcourse.java:

package jdbc;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.util.Scanner;

public class jdbcInsert {

public static void main(String[] args) {

try {

Scanner sc = new Scanner(System.*in*);

Connection conn = jdbcq1.*getConnection*()) {

System.*out*.print("Enter Course ID:");

int id = sc.nextInt();

sc.nextLine();

System.*out*.print("Enter Course Name:");

String name = sc.nextLine();

System.*out*.print("Enter Faculty:");

String faculty = sc.nextLine();

System.*out*.print("Enter Credits:");

int credits = sc.nextInt();

String query = "INSERT INTO courses VALUES (?, ?, ?, ?)";

PreparedStatement ps = conn.prepareStatement(query);

ps.setInt(1, id);

ps.setString(2, name);

ps.setString(3, faculty); ps.setInt(4, credits);

int rows = ps.executeUpdate();

System.*out*.println(rows > 0 ? "Course inserted" : "Insertion failed.");

} catch (Exception e) {

e.printStackTrace();

}

}

}

**Output:**

Connected to the database

Enter Course ID: 101

Enter Course Name: CSE

Enter Faculty: Disha

Enter Credits:8

Course inserted

Selectcourse.java:

package jdbc;

import java.sql.Connection;

import java.sql.ResultSet;

import java.sql.Statement;

public class JdbcSelect {

public static void main(String[] args) {

try (

Connection conn = jdbcq1.*getConnection*();

Statement stmt = conn.createStatement();

ResultSet rs = stmt.executeQuery("SELECT \* FROM courses")) {

System.*out*.println("Course List:");

while (rs.next()) {

System.*out*.println("ID:" + rs.getInt("course\_id") + ",Name:" + rs.getString("course\_name") + ",Faculty:" + rs.getString("faculty") +

",Credits:" + rs.getInt("credits"));

}

} catch (Exception e) {

e.printStackTrace();

}

}

}

**Output:**

Connected to the database

Course List:

ID:1, Name: Java, Faculty: Preethi, Credits:5

ID:3, Name: Python, Faculty: Shivani, Credits:5

ID:4, Name: HTML, Faculty: Priya, Credits:5

ID:10, Name: CSS, Faculty: Narayan, Credits:5

Updatecourse.java:

package Coursereg;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.util.Scanner;

public class JdbcUpdate {

public static void main(String[] args) {

try (

Scanner sc = new Scanner(System.*in*);

Connection conn = Jdbcq1.*getConnection*()) {

System.*out*.print("Enter Course ID to update:");

int id = sc.nextInt();

sc.nextLine();

System.*out*.print("Enter new Faculty:");

String faculty = sc.nextLine();

System.*out*.print("Enter new Credits:");

int credits = sc.nextInt();

String query = "UPDATE courses SET faculty=?,credits=? WHERE course\_id=?";

PreparedStatement ps = conn.prepareStatement(query);

ps.setString(1,faculty);

ps.setInt(2,credits); ps.setInt(3,id);

int rows = ps.executeUpdate();

System.*out*.println(rows > 0 ? "Course updated successfully.":"No course found with given ID.");

} catch (Exception e) {

e.printStackTrace();

}

}

}

**Output:**

Connected to the database

Enter Course ID to update: 101

Enter new Faculty: Surya

Enter new Credits: 5

Course updated successfully.

Deletecourse.java:

package Coursereg;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.util.Scanner;

public class JdbcDelete {

public static void main(String[] args) {

try (

Scanner sc = new Scanner(System.*in*);

Connection conn = Jdbcq1.*getConnection*()) {

System.*out*.print("Enter Course ID to delete: ");

int id = sc.nextInt();

String query = "DELETE FROM courses WHERE course\_id=?";

PreparedStatement ps = conn.prepareStatement(query);

ps.setInt(1, id);

int rows = ps.executeUpdate();

System.*out*.println(rows > 0 ? "Course deleted successfully.":"No course found with given ID.");

} catch (Exception e) {

e.printStackTrace();

}

}

}

**Output:**

Connected to the database

Enter Course ID to delete: 101

Course deleted successfully.

**Task2:**

**Queries:**

use inventorydb;

create table inventorydb.products (product\_id INT PRIMARY KEY,product\_name VARCHAR(100),quantity INT,price DECIMAL(10,2));

select \* from products;

**JDBC Operations:**

Dbutilization.java:

package Inventorysys;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

public class Dbutilization {

private static final String URL"jdbc:mysql://localhost:3306/inventorydb";

private static final String USER= "root";

private static final String PASSWORD= "Shukrutha@2002";

public static Connection getConnection() throws SQLException {

Connection conn = DriverManager.*getConnection*(URL, USER, PASSWORD);

System.*out*.println("Connected to the database");

return conn;

}

}

**Output:**

Connected to the database

Insertinventory:

package Inventorysys;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.util.Scanner;

public class Insertinventory {

public static void main(String[] args) {

try (

Scanner sc = new Scanner(System.*in*);

Connection conn = Dbutilization.*getConnection*()) {

System.*out*.print("Enter product ID:");

int id = sc.nextInt();

sc.nextLine();

System.*out*.print("Enter product Name:");

String name = sc.nextLine();

System.*out*.print("Enter quantity:");

int qty = sc.nextInt();

System.*out*.print("Enter price:");

double price = sc.nextDouble();

String query = "INSERT INTO products VALUES (?, ?, ?, ?)"; PreparedStatement ps = conn.prepareStatement(query);

ps.setInt(1, id);

ps.setString(2, name);

ps.setInt(3, qty);

ps.setDouble(4, price);

int rows = ps.executeUpdate();

System.*out*.println(rows > 0 ? "Product added":"Insertion failed.");

} catch (Exception e) {

e.printStackTrace();

}

}

}

**Output:**

Connected to the database

Enter product ID:101

Enter product Name: bottle

Enter quantity:50

Enter price:500

Product added

SelectInventory:

package Inventorysys;

import java.sql.Connection;

import java.sql.ResultSet;

import java.sql.Statement;

public class Selectinventory {

public static void main(String[] args) {

try (

Connection conn = Dbutilization.*getConnection*();

Statement stmt = conn.createStatement();

ResultSet rs = stmt.executeQuery("SELECT \* FROM products")) {

System.*out*.println("---- Product Inventory --- ");

while (rs.next()) {

System.*out*.println("ID: " + rs.getInt("product\_id") + ",Name:" + rs.getString("product\_name") + ",Quantity:" + rs.getInt("quantity") +

",Price:" + rs.getDouble("price"));

}

} catch (Exception e) {

e.printStackTrace();

}

}

}

**Output:**

Connected to the database

---- Product Inventory ----

ID: 1, Name: Box, Quantity: 50, Price:500.0

ID: 2, Name: GlassBox, Quantity: 60, Price:1000.0

ID: 3, Name: KidsBox, Quantity: 70, Price:2000.0

ID: 4, Name: SteelBox, Quantity: 100, Price:20000.0

Updateinventory.java:

package Inventorysys;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.util.Scanner;

public class Updateinventory {

public static void main(String[] args) {

try (

Scanner sc = new Scanner(System.*in*);

Connection conn = Dbutilization.*getConnection*()) {

System.*out*.print("Enter product ID to update quantity: ");

int id = sc.nextInt();

System.*out*.print("Enter New Quantity: ");

int qty = sc.nextInt();

String query = "UPDATE products SET quantity = ? WHERE product\_id = ?";

PreparedStatement ps = conn.prepareStatement(query);

ps.setInt(1, qty);

ps.setInt(2, id);

int rows = ps.executeUpdate();

System.*out*.println(rows > 0 ? "Quantity updated!":"Product not found.");

} catch (Exception e) {

e.printStackTrace();

}

}

}

**Output:**

Connected to the database

Enter product ID to update quantity: 101

Enter New Quantity: 100

Quantity updated!

Deleteinventory.java:

package Inventorysys;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.util.Scanner;

public class Deleteinventory {

public static void main(String[] args) {

try (

Scanner sc = new Scanner(System.*in*);

Connection conn = Dbutilization.*getConnection*()) {

System.*out*.print("Enter Product ID to delete: ");

int id = sc.nextInt();

String query = "DELETE FROM products WHERE product\_id = ?";

PreparedStatement ps = conn.prepareStatement(query);

ps.setInt(1, id);

int rows = ps.executeUpdate();

System.*out*.println(rows > 0 ? "Product deleted" : "Product not found");

} catch (Exception e) {

e.printStackTrace();

}

}

}

**Output:**

Connected to the database

Enter Product ID to delete: 101

Product deleted